

POLYAK, M. G.
YEGOROV, K.P.; POLYAK, M.U.

Principles of constructing equipment for simplified multichannel
communication systems on cable and relay lines. Elektrosviaz' 11
no.4:48-54 Ap '57. (MLRA 10:5)
(Telephone lines)

Polyak, M.A.

EPSHTEYN, V.G.; KHOLODKOVSKIY, B.N.; POLYAK, M.A.; BAKHAREV, A.I.

Triethanolamine derivatives as vulcanization accelerators.
Kauch. i rez. 16 no.11:15-21 N '57. (MIRA 11:2)
(Ethanol) (Vulcanization)

POLYAK, M.S.

BERMAN, A.M.; POLYAK, M.S. (Kashira)

Involvement of the esophagus in Osler's disease. Arkh.pat. 19
no.12:72-74 '57. (MIRA 11:2)

1. Iz Kashirskoy rayonnoy bol'nitsy (glavnnyy vrach I.L.Kozello) i
patomorfologicheskogo otdela Moskovskogo oblastnogo nauchno-
issledovatel'skogo klinicheskogo instituta (zav. - prof. S.B.
Baynberg)

(POLYCYTHEMIA VERA, compl.
esophageal hemorrh. in 14-year-old girl)
(ESOPHAGUS, hemorrh.
in polycythemia vera in 14-year-old girl)

POLYAK, M. U.

PA 19T96

USSR/Communications - Development
Telegaphy - Development

Nov 1946

"Development of Long Distance Communications in the USSR During the New Stalin Five Year Period," M. U. Polyak, Chief, Technical Division, Ministry of Communications, 2 pp

"Vestnik Svyazi - Elektro Svyaz" No 11 (80)

Discusses development of wire and cable lines, increase in the number of International Telephone Stations, sources of electric power and general over-all development of telegraphic communications.

19T96

POLYAK, M. U.

777W

USSR/Radio
Communications

Nov 1947

"Inventors of the National Techniques of Communications," M. U. Polyak, Chief, Technical Section, Ministry of Communications, E. S. Bortman, Senior Engr, Bureau of Inventions, 1 p

"Vestnik Svyazi - Elektrosvyaz" No 11 (92)

Lists the various Russian scientists who have been contributors to the development of radio techniques in the Soviet Union.

LC

29T92

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4

POLYAK, M. U.

"Trunk-Line Communications on the Decimeter Wave Band Mascoe-Gor'kiy,
Gosenergoizdat, 1947

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4"

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4

POLYAK, M. U.

"Results of "11-Union Congress on Improving Conditions in the Field of Communications," Vest. svyazi-elektronika svyaz., No.2, 1948
Chief, Tech. Sci., Min. of Communications

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4"

POLYAK, M.U.; VORTMAN, E.S.

Innovators of Russian communication engineering. Vest.sviazi ?
no.11:11 N '55. (MIRA 9:1)

1.Nachal'nik Tekhnicheskogo otdela Ministerstva svyazi (for
Vortman).2.Starshiy inzhener Byuro izobreteniy.
(Telecommunication)

Polyak, M.U.

270

AUTHORS: Yegorov, K. P. and Polyak, M.U.

TITLE: Design principles of simplified multichannel cable and radio-relay system equipment. (Printsipy postroyeniya apparatury uproshchennykh sistem mnogokanal'noy svyazi po kabel'nym i radioreleynym liniyam).

PERIODICAL: "Elektrosvyaz'" (Telecommunications), 1957, No.4, April,
pp.48-54 (U.S.S.R.)

ABSTRACT:

Work on economical multi-channel short-distance communication equipment began in U.S.S.R. in 1953. In the present articles, the authors present and discuss design principles of the existing prototype equipment. Standard high-frequency symmetrical cables are used, since for the same number of channels, the frequency-compression equipment can be dispensed with. Also, owing to the increase of bandwidth of a single channel from 4 to 6 to 8 kc/s, the terminal equipment becomes much simpler, which permits a considerable reduction in the quality and the number of side-band filters in the suppressed carrier SSB transmission. When double side-band transmission is used, the individual band filters become unnecessary because of the larger bandwidth and, if the number of channels does not exceed 12, common group amplifiers may be used. Both systems are adopted abroad, but the problem of an economical multi-channel equipment serving a large local and long-distance

Design principles of simplified multichannel cable and
radio-relay system equipment. (Cont.)

telephone network has not been solved. It can be solved by the use of a multi-channel system with a simple phase-shifting network in every channel and of simple band-pass filters in detection, the principle of phase-shifting equipment is as follows: two voice channels at the input (300 to 3400 c/s) are shifted in phase by simple phase-shifting networks and are then applied to the inputs of two modulators. The phase-shifting quadripoles are chosen so as to produce approximately a 90° - phase shift between signals applied to the two modulators. The carrier currents are also shifted by 90° out of phase. As shown in the block diagram of the circuit, currents of one of the side-bands are combined in a common load, the other side-band is suppressed. Small attenuation of the unwanted side-band is needed (3.0 to 2.7 Nepers), components are cheap (coils with Q of 40 to 50, condensers within $\pm 5\%$). The basic filtering is made at voice frequencies, it is the same both at the receiving and sending ends, so that duplicating is possible. The possibility of use of semi-conductor devices and of advanced wiring and packaging techniques could make the installation smaller, consuming less power and having better reproducibility characteristics.

POLYAK, M.U.
POLYAK, M.U.

From the first high-frequency installations to powerful long-distance communication systems. Elektrosviaz' 11 no.11:38-41
(MIRA 10:12)
N '57.
(Telegraph lines) (Telecommunication)

POLYAK, M. U.

M. U. Polyak, "Method of Voice-frequency Telegraphy with Side-band Modulation Keying."

Authors' Certificates, Elektrosvyaz, 1958, No. 7, pp 77.

OGARKOV, Petr Fedorovich; POLYAK, M.U., kand.tekhn.nauk, retsenzent;
FARBER, Yu.D., inzh., ötv.red.; PETROVA, V.Ye., red.; MARKOCH,
K.G., tekhn.red.

[Long distance calls] Mezhdugorodnoe telefonirovaniye. Moskva,
Gos.izd-vo lit-ry po voprosam sviazi i radio, 1959. 99 p.
(MIRA 12:8)

(Telephone lines)

BIRYUKOV, V.A., kand. tekhn. nauk; POLYAK, M.U., kand. tekhn. nauk

New multiplex apparatus in rural telephone systems. Vest. sviazi
24 no.6 18-22 Je '62. (MERA 17:1).

KUPREVASSER, M.M., inzh.; IESHCHINSKIY, A.A., kand. tekhn.nauk,
POLYAK, M.I., kand. tekhn. nauk

Standard individual equipment for multichannel high-
frequency telephone systems. Vest. sviazi 25 no.1:3-6
Ja '65.

(MIRA 18:4)

INDRA. Ladislav: SHLAPAK, Frantisek [Slapak, Frantisek]; POLAK,
M.U., oty. red., OBRATSOVA, Ye.A., red.

[High-frequency KNK-6S telephone equipment for use in rural
areas] Apparatura vysokochastotnogo telefonirovaniia KNK-6S
dlia sela; informatsionnyi sbornik. Moskva, Sviaz', 1965.
(MIRA 18:4)
53 p.

MLEYKOVSKIY, Solomon Gerasimovich; MOROZOV, Arkadiy Petrovich;
POIVAK, M.I., retsenzent; KHLAN, K.D., retsenzent;
ABCLITS, I.A., ott. red.; ULANOVSKAYA, L.M., red.

[Long-distance communication and multiplexing of municipal telephone networks] Dal niaia sviaz' i uplotnenie gorod-skikh telefonnykh tsepeii. Moskva, Izd-vo "Sviaz", 1964.
(MIRA 17:10)
357 p.

POLYAK, Mark Uriyevich; FRIMAN, Il'ya Naumovich; TYULIAYEV, A.N.,
otv. red.; BOGACHEVA, G.V., red.; ROMANOVA, S.F., tekhn.red.

[KRR apparatus] Apparatura KRR; informatsionnyi sbornik.
Moskva, Sviaz'isdat, 1963. 158 p. (MIRA 16:10)
(Telephone--Equipment and supplies)

VEDERNIKOVA, Ye.I.; LYUSHINSKAYA, I.I.; LINETSKAYA, G.N.; POLYAK, M.V.

Maltase activity of enzyme preparations of molds used for baking.
Mikrobiologija 31 no.6:1087-1091 1962. (MIRA 16:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut pishchevoy
promyshlennosti.
(MOLDS (BOTANY)) (GLUCOSIDASE) (BAKING)

VEDERNIKOVA, Ye.I.; LYUSHINSKAYA, I.I.; POLYAK, M.V.; SHAROYKO, K.M.

Biochemical, colloidal, and technological properties of waxy corn.
Biokhim.zerna no.5:184-205 '60. (MIRA 14:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut pishchevoy
promyshlennosti.
(Corn (Maize))

POLYAK, N. A.

Povrezhdeniya i neispravnosti rotora paroturbinnogo generatorda. Moskva,
Gosenergoizdat, 1952. 163 p. illus. (Turbinnye generatory v eksploatacii,
vyp. 1) Bibliographical footnotes.

Damages and failures of a steam turbogenerator rotor.

DLC:TJ737.P6

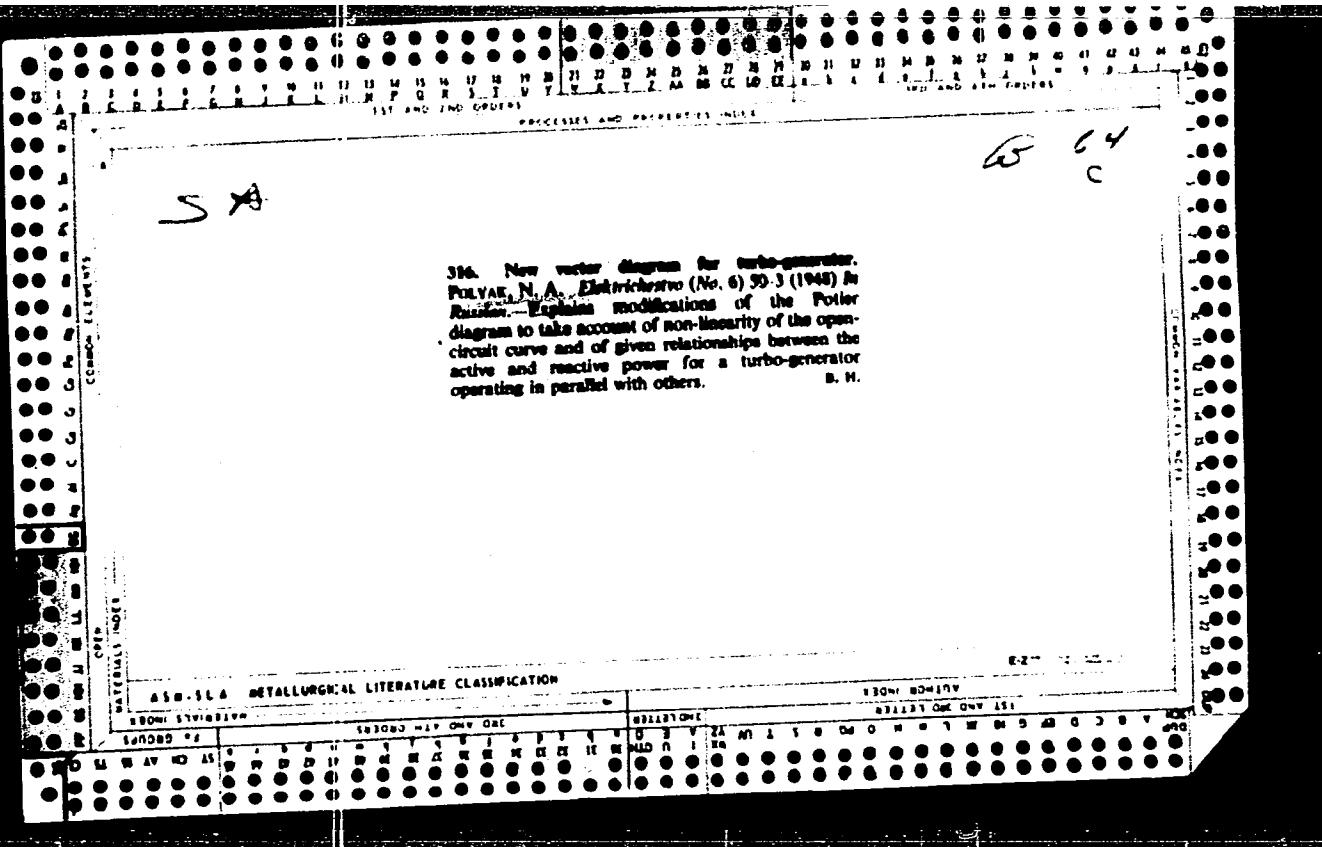
SO: Manufacturing and Mechanical Engineering in the Soviet Union. Library
of Congress, 1953.

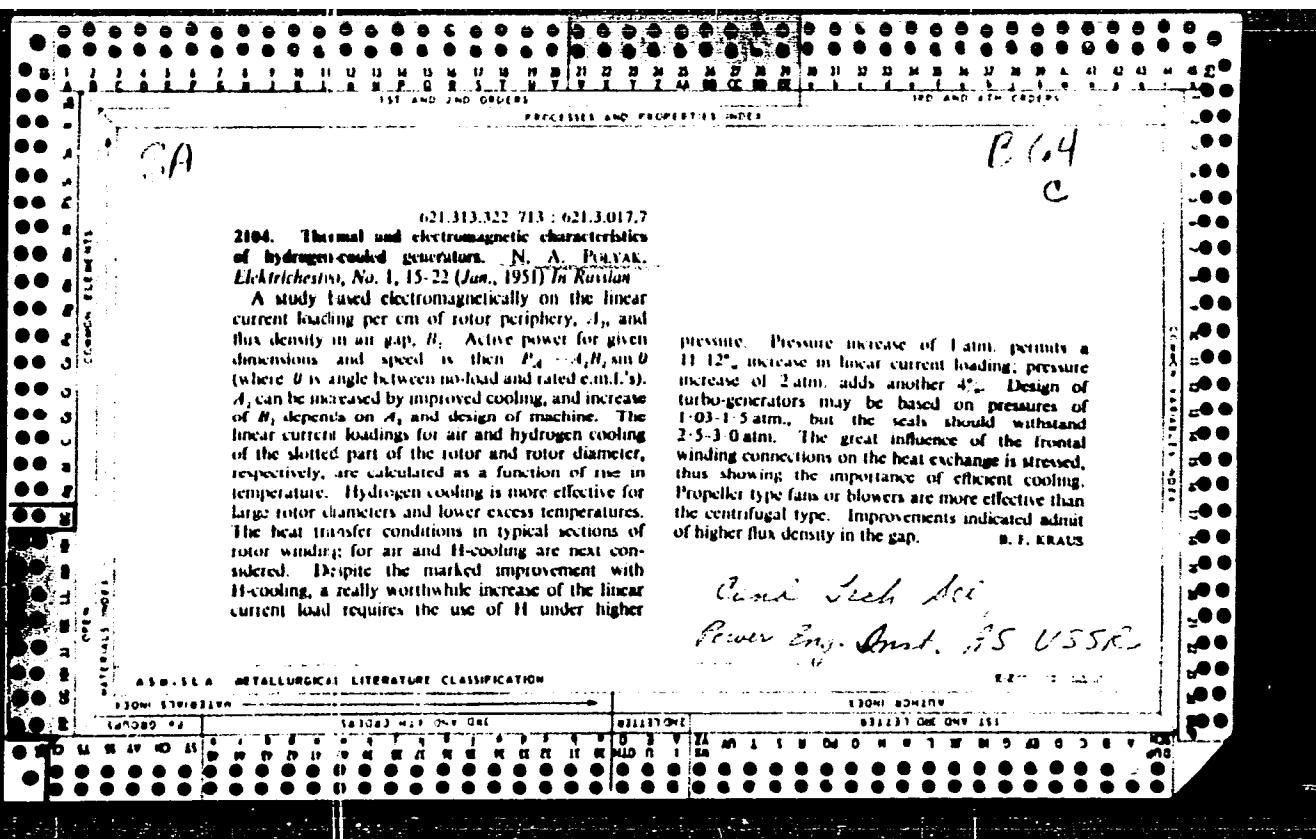
POLYAK, N. A.

Technology

Standard operating conditions of turbo-generators, Moskva, Gos. energ. izd-vo, 1948.

Monthly List of Russian Accessions, Library of Congress March 1952 UNCLASSIFIED.





POLYAK, N.A., inzh.; SHIPUNOVA, L.P., inzh.

Carrying capacity of electric power transmission lines from
thermal electric power plants. Elek. stat. 35 no.1:71-78
Ja '64. (MIRA 17:6)

1. Energoset'projekt.

POLYAK, N. A., POSTNIKOV, I. M., Prof.

Postnikov, I. M.

Remarks on I. M. Postnikov's article "Universal machine constant." Elektrichestvo No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952. 1953, Uncl.

POLYAK, N. A.

AID P - 934

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 3/25

Author : Polyak, N. A., Kand. of Tech. Sci.

Title : Determination of no-load saturation characteristics of synchronous generators with salient poles in calculations of dynamic stability.

Periodical : Elektrichestvo, 10, 16-19, 0 1954

Abstract : The author considers indispensable the accounting for non-linear saturation characteristics for generators provided with forced excitation. A practical method is worked out for such accounting and the results obtained comply sufficiently well with experimental data obtained from electro-dynamic models. Two diagrams, 3 Russian references (1932, 1948, 1953).

Institution : Teploelectroproyekt (Trust for the Planning and Investigation of Thermal and Electric Power Plants, Networks and Substations)

Submitted : Je 16. 1954

machines the rotors or ~~worm~~
windings imbedded into the faces of the salient field
pole pieces and are short-circuited at their ends by
circular rings. These windings form the artificial
circular pole.

APPROVED FOR RELEASE ON 06/15/2000

current circuits in the steel sheets of the rotor poles. The author concludes that formulas used at present for calculating electric characteristics of the damping system have to be corrected. He presents new formulas which permit calculating the free distribution of the winding rods on the faces of the field poles. Two numerical examples, 5 diagrams, 2 tables, 2 Soviet references (1940-1952).

Card 2/2 Pub. 27 - 8/30

VEPI

Institution: TEPLOELEKTROPROYEKT (Trust for the Planning and Investigation of Thermal and Electric Power Plants, Networks and Substations)

Submitted : Je 4, 1954

POLYAK, N.A.

621.313.3.013.8

1148. ENGINEERING METHOD OF CALCULATING THE ZONE
OF ASYNCHRONOUS SELF-EXCITATION OF AN ELECTRIC
MACHINE

N.A. Polyak.

Elektrichstvo, 1936, No. 11, 23-9. In Russian.

Series connection of machines, particularly alternators, with static capacitors or idling transmission lines of comparatively large capacitance may give rise to self-excitation of the machine which then will absorb VAR from the capacitance. For this "synchronous" type of self-excitation, it is necessary that d.c. circulates in the field winding, or for the residual magnetization of the poles to be strong, and a certain relation to exist between the capacitive resistance of the external circuit and that of the machine. Another form of self-excitation is the "asynchronous" type, which is possible at any active-reactive loading and in which the frequency of current and voltage differs from that corresponding to rotor speed and number of pole pairs; it does not depend on d.c. in the field winding or on residual magnetization of the poles. A definite however, is the presence of series capacitors. A method of determining the zone of synchronous self-excitation is presented, showing the interrelation between the parameters of the rotor circuit and the width of the said zone, from which may be determined necessary modifications to the machine to reduce the width of self-excitation. The results are confirmed by experiment,

B.F. Kraus

All-USSR State Planning Inst. "Teploelektroprojekt"
Card Tech Sci

POLYAK, N.

621.313
187. THE GEOMETRY OF THE TWO-POLE TURBOGENERATOR AND METHODS OF INCREASING ITS PER UNIT OUTPUT

A. Polyak

VESTNISCHINA, 1957, No. 1, 28-30. In Russian.

According to the frequency relations of the free rotor oscillations each diameter of the active part of the rotor is related to a well-defined maximum possible length/diameter ratio. This maximum decreases with increasing diameter of the rotor barrel, except for the possibility of a slight increase in the ratio by the use of rotor designs with mechanically reinforced tail-pieces. Without this, an increase of the diameter of the rotor barrel beyond 1 m does not enable the active rotor length to be increased any further. An increase of the active rotor volume by use of large-diameter rotors is limited by the mechanical characteristics of the rotor bearings and its steel end-retaining rings. At present the only existing way of appreciably increasing the "per unit" output of a turbo-generator is the use of higher current densities in the rotor and stator windings,

once the transition to gas cooling and, in the case of the stator conductors, liquid cooling of the windings. New designs of turbo-generators must be based on electromagnetic and thermal characteristics not only under normal operating conditions, but also under transient conditions unavoidable in actual service.

B. F. Kraus

VGPI

"*Tsagolob Teploelektroprojekt*"

POLYAK, N.A., inzh.

Asynchronous characteristics and related parameters of present-day
large double-pole turbogenerators. Elek. sta. 36 no. 10:45-53 O '65.
(MIRA 18:10)

POLYAK, N. N., INzh.

Preliminary evaluation of the carrying capacity of an existing
electric transmission line. Flek. sta 36 no. 4149-53 Ap '65.
(MTR: 10, 6)

POLYAK, N.A., inzh.

Brevity of the ceiling potential and automatic excitation
regulation system of large turbogenerators. Elek. sta.
34 no.3:69-76 Mr '63. (MIRA 16:3)
(Turbogenerators)

POLYAK, N.A., inzh.

Excitation systems for new types of large turbogenerators. Elek.
sta. 32 no.8:37-45 Ag '61. (MIRA 14:10)
(Turbogenerators)

POLYAK, N.A.

Short circuits, slip operation, and falling into step of turbogenerators. Elektricheskiye no.11:18-24 N '58. (MIRA 11:12)

1.Teploelektroproyekt.
(Turbogenerators)

8(5)

AUTHOR: Polyak, N. A.

SOV/105-50-11-5/28

TITLE: Short Circuit, Slip Operation and Re-Synchronization of Turbo-
Alternators (Korotkiye zamykaniya, asinkhronnyy khod i re-
sinkhronizatsiya turbogeneratorov)

PERIODICAL: Elektrichestvo, 1958, Nr 11, pp 18-24 (USSR)

ABSTRACT: The investigation carried out by the author in the "sektor
releynoy zashchity i ustoychivosti Teploelektroprojekta"
(Section of Relay Protection and Stability at the Teplo-
elektroprojekt) served as a basis for the compilation of the
results given in this work. The calculations were carried
out by A. F. Tsukerman, coworker of the Teploelektroprojekt.
This paper is limited to a presentation of the initial data
and of the results of the theoretical investigations. These
investigations were intended to help in a determination of
the quantitative influence of the various circumstances
which are caused by short-circuits and in answering the ques-
tion, which of them are most important in an estimation of
the dynamic stability of the parallel operation of turbo-
alternators. The investigations were also intended to clar-

Card 1/3

Short Circuit, Slip Operation and Re-Synchronization of Turbo-Alternators

SOV/105-58-11-5/28

fy the conditions for a slip operation and for a re-synchronization. A basic system consisting of three parallel 220 kV lines, connected to a power system with a total output of the turbo-alternators and of the synchronous condensers of about 4 000 MVA was the object of this study. The length of the line was 200 km. The investigations lead to the following results: The actual dynamic stability in a parallel operation of turbo-alternators in case of short circuits in the grid always exceeds the stability computed by usual methods. The greatest discrepancies occur with heavy short-circuits at points relatively adjacent to the generator bushings. This is basically due to the fact that in the computation no account is taken of the electromagnetic torque of the turbo-alternator. These torques are caused by the aperiodic component of the stator current which is generated at the moment of short-circuit or at other abrupt changes in the mode of operation. The re-synchronization of turbo-alternators of fuel power stations can be effected under conditions approaching those discussed in this paper. This is true even in the case that the total output of the turbo-alternators fallen out of synchronism somewhat exceeds that which can be trans-

Card 2/3

SOV/100-58-11-5/28

Short Circuit, Slip Operation and Re-Synchronization of Turbo-Alternators

mitted through the remaining lines still in operation. There
are 3 figures, 5 tables, and 6 Soviet references.

ASSOCIATION: Teploelektroprojekt

SUBMITTED: June 18, 1958

Card 3/3

POLYAK, N.R.

Computing the formed elements of blood and the cancerous cells
of ascitic fluid with an electron-potis counter. Fiziol. zhurn.
[Ukr.] 9 no.5:687-688 S-0'63 (MIRI 1781)

1. Ukrainskiy institut eksperimental'noy i klinicheskoy onkologii,
Kiyev.

FINKEL'SHTYN, lev Alekseevich; GINSKII, Doreha Khaimovich; VOTSKOVICH,
B.Y., retezant; GORENBERG, R.I., retezant; BESCHASTNOV, I.S.,
red.; POLIAK, M.Iu., red.; ZEINEL'GALI, O.S., zaitsev.

[Antenna circuits for wide-band shortwave transmitters; design and
construction] Antennye kontury shirokodiapazonnykh korotkovolno-
vykh peredatchikov; raschet i konstruirovaniye. Moskva, Gos.energ.
izd-vo, 1960. 263 p. (MIRA 13:9)
(Radio, Shortwave--Antennas)

POLYAK, N. V.

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23

BUCKLE AND BUCKLE

621.390,871.4 : 621.396.61
 XIII. Calculation of output networks of radio transmitters. RULAN, N. Yu., AND PAVOV, P. G. *Auditskayaia, 8* (No. 2), 37-42 (March-April, 1949). In Russian. A graphical method of obtaining input impedance characteristics of an aerial for a transmitter of given power and output tuning elements is developed. It is applied particularly to the case of parallel aerial feed.

1.

430-314 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4"

POLYAK, O., master sports SSSR

Fifth round of the Chess Olympiad. Nauka i zhyttia 12 no. 2/63
(MIRA 16:4)
F '63.

(Chess...Tournaments)

POLYAK, O., master sporta SSSR

Seventh round of chess tournament. Nauka i zhyttia 13 no.10:63
N '63.

(MIRA 16:12)

POLYAK, O., master sporta SSSR

Answers to the first round problems of the chess Olympiad. Nauka
i zhyttia 12 no.4:60 Ap '62. (MIRA 15:8)
(Chess problems)

POLYAK, O., master sporta SSSR po shakhmatam

A machine that plays chess like a chess champion. Znan.
ta pratsia no.10:31 0 '59. (MIR 13:2)

(Electronic calculating machines)
(Chess)

POLYAK, O., master sporta SSSR po shakhmatam

Was there a chess champion by the name of Mirko Chentovich?
Znan.tta pratsia no.6:32 Je '59. (MIR 12:11)
(Chess)

POLYAK, O., master shakhmatnogo sporta SSSR

We are beginning a chess Olympiad. Nauka i zhyttia no.11 '61-62
N '61. (MIRA 14.12)
(Chess---Tournaments)

LIVSHITS, Boris Samoylovich; POLYAK, Petr Yul'yevich. Prinimal
uchastiye SMIRNOV, N.N.; GOLUBTSOV, I.Ye., otv. red.;
KOMAROVA, Ye.V., red.; TRISHINA, L.A., tekhn. red.

[Rural telephone communication system] Sistema sel'skoi
telefonomoi sviazi. Moskva, Sviaz'izdat, 1963. 127 p.
(MIRA 17:1)
(Telephone)

KUCHERYAVYY, Ye.I.; PAVLOVSKIY, I.Ye.; POLYAK, P.Yu.; FARAFONOV, L.S.,
otv. red.; PETROVA, V.Ye., red.; DIKOV, V.N., tekhn. red.

[Group connection of telephone lines] Kollektivnoe vkluchenie tele-
fonnykh linii. Informatsionnyi sbornik. Moskva, Gos. izd-vo lit-ry
po voprosam sviazi i radio, 1961. 135 p. (MIRA 14:9)

1. Nauchno-issledovatel'skiy institut gorodskoy i sel'skoy telefon-
noy svyazi Ministerstva svyazi SSSR (for Kucheryavyy, Pavlovskiy,
Polyak).

(Telephone lines)

ZAYENCHIK, L., inzh.; POLYAK, R., inzh.; PRIMAK, M., inzh.

Mathematical methods for planning the transportation of small
freight consignments. Avt.transp. 42 no.3:36-37 Mr '64.

(MIRA 17:4)

L 00536-66 EWT(d)/T IJP(c)

ACCESSION NR: AP5023910

UR/0020/64/159/004/0726/0729

AUTHOR: Zukhovitskiy, S. I.; Polyak, R. A.

TITLE: Algorithm for the solution of the problem of a rational chebushev approximation

SOURCE: AN SSSR. Doklady. v. 159, no. 4, 1964, 726-729

TOPIC TAGS: algorithm, approximation, function

ABSTRACT: The article concerns the solution of the problem

$$R_i(x; y) \equiv \frac{a_i^T x}{b_i^T y} + \gamma_i \equiv \frac{a_{i1}x_1 + \dots + a_{in}x_n}{b_{i1}y_1 + \dots + b_{im}y_m} + \gamma_i, \quad i \in I = \{1, \dots, 2p\}, \quad (1)$$

where space Ω containing interior points is defined by

$$\varphi_j(x; y) \equiv \varphi_j(x_1, \dots, x_n; y_1, \dots, y_m) \leq 0, \quad j \in J = \{1, \dots, q\}. \quad (2)$$

It is assumed that in system (2)₁ where the functions $\varphi_j(x, y)$ are convex and smooth,

$$b_{ij} > \tau > 0, \quad i \in I; \quad |y_i| - 1 \leq 0, \quad i \in I_p = \{1, \dots, m\}.$$

The problem is solved by finding a point of system (1) $(x^*; y^*) \in \Omega$ such that

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L 00536-66

ACCESSION NR: AP5023910

$$\max_{t \in I} R_t(x; y^*) = \min_{(x; y) \in \Omega} \max_{t \in I} R_t(x; y).$$

The second algorithm, unlike the first, depends on the direction of descent, instead of striving to obtain a maximum decrease of the function, $\max_{t \in I} R_t(x, y)$, which at some steps is a maximum distance away from the boundary of Ω .

Subsequently a minimization problem is solved with certain constraints.
Orig. art. has: 11 formulas.

ASSOCIATION: Kievskiy gosudarstvennyy pedagogicheskiy institut im. A. M. Gor'kogo (Kiev State Pedagogical Institute); Ukrainskiy dorozhno-transportnyy nauchno-issledovatel'skiy institut (Ukrainian Highway Transportation Scientific Research Institute)

SUBMITTED: 18Apr64

ENCL: 00

SUB CODE: MA

NR REF Sov: 003

OTHER: 002

JPRS

Card 2/2

L 01472-66 EWT(d)/T/EWP(l) IJP(c)

ACCESSION NR: AP5018737

UR/0020/65/163/002/0282/0284

AUTHOR: Zukhovitskiy, S. I.; Polyak, R. A.; Primak, M. Ye.

44,55

44,55

44,55

304

B

16,44,55

TITLE: A numerical method for the solution of a problem of convex programming in Hilbert space

SOURCE: AN SSSR. Doklady, v. 163, no. 2, 1965, 282-284

TOPIC TAGS: programming, control theory, Hilbert space, numerical method

ABSTRACT: In a Hilbert space H given the convex functional $f_0(x)$ in a bounded region defined by the inequalities

$$f_j(x) \leq 0, \quad j \in J = \{1, \dots, p\}.$$

the problem is to minimize $f_0(x)$. To solve this problem, an algorithm of steepest descent is constructed in which the direction of descent is found at each step by a quadratic programming in a finite-measure space. A proof for the convergence of the algorithm is sketched out. Orig. art. has: 18 formulas.

ASSOCIATION: Kievskiy gosudarstvennyy pedagogicheskiy institut im. A. M. Gor'kogo,

Card 1/2

L 01472-66

ACCESSION NR: AP5018737		
Ukrainskiy dorozhno-transportnyy nauchno-issledovatel'skiy institut (Kiev State Pedagogical Institute, Ukrainian Scientific Research Institute of Roads and Trans- portation) 44,55		
SUBMITTED: 28Dec64	ENCL: 00	SUB CODE: MA, DP
NO REF SOV: 004	OTHER: 001	
Card 2/2		

L 13710-63

BIS/EMT(G)/FCC(W). AFFTC IJP(C)

ACCESSION NR: AP3003501

8/0020/63/151/001/0027/0030

AUTHORS: Zukhovitskiy, S. I.; Polyak, R. A.; Primak, M. Ye.

54

TITLE: Algorithm for the solution of the convex Tchebycheff approximation problem

SOURCE: AN SSSR. Doklady*, v. 151, no. 1, 1963, 27-30

TOPIC TAGS: algorithm, Tchebycheff approximation, linear complex equation

ABSTRACT: In a previous work by the first-named author an algorithm was developed for the solution of a system of linear complex equations. In the present work, the authors further develop the algorithm and apply it to the solution of the more general problem of determining the minimum of an arbitrary convex piece-wise smooth function. The paper was presented by Academician N. N. Bogolyubov on 18 January 1963. Orig. art. has: 10 formulas.

ASSOCIATION: Kyivskiy gosudarstvennyy pedagogicheskiy institut im. A. M. Gor'kogo (Kiev Pedagogical Institute)

SUBMITTED: 02Jan63

DATE ACQ: 30Jul63

ENCL: 00

SUB CODE: MM

NO REF Sov: 003

OTHER: 000

Card 1/1

ZUKHOVITSKIY, S.I.; POLYAK, R.A.

Algorithm for solving the problem of rational Chebyshov approximation. Dokl. AN SSSR 159 no.4:726-729 D '64 (MIRA 1821)

1. Kiyevskiy gosudarstvennyy pedagogicheskiy institut imeni A.M. Gor'kogo i Ukrainskiy dorozhno-transportnyy nauchno-issledovatel'skiy institut. Predstavлено akademikom A. Yu. Ishlinskim.

ZUKHOVITSKIY, S.I.; POLYAK, R.A.; PRIMAK, M.Ye.

Algorithm for solving the problem of convex programming.
Dokl. AN SSSR 153 no.5:991-994 D '63. (MIRA 17:1)

1. Kiyevskiy gosudarstvennyy pedagogicheskiy institut im.
A.M. Gor'kogo i Ukrainskiy dorozhno-transportnyy nauchno-
issledovatel'skiy institut. Predstavлено akademikom A.Yu.
Ishlinskim.

ZUKHOVITSKIY, S.I.; POLYAK, R.A.; PRIMAK, M.Ye.

Algorithm for solving the problem of convex Chebyshev approximation.
Dokl. AN SSSR 151 no.1:27-30 Jl '63. (MIRA 16:9)

1. Kiyevskiy gosudarstvennyy pedagogicheskiy institut im. A.M.
Gor'kogo. Predstavлено академиком N.N.Bogolyubovym.
(Linear equations) (Algorithms)

L 13710-63	BIS/EAT(C)/FGG(W). AFFTC	IJP(C)
ACCESSION NR: AP3003501	S/0020/63/151/001/0027/0030	
AUTHORS: Zukhovitskiy, S. I.; Polyak, R. A.; Primak, M. Ye.	54	
TITLE: Algorithm for the solution of the convex Tchebycheff approximation problem		
SOURCE: AN SSSR. Doklady*, v. 151, no. 1, 1963, 27-30		
TOPIC TAGS: algorithm, Tchebycheff approximation, linear complex equation		
ABSTRACT: In a previous work by the first-named author an algorithm was developed for the solution of a system of linear complex equations. In the present work, the authors further develop the algorithm and apply it to the solution of the more general problem of determining the minimum of an arbitrary convex piece-wise smooth function. The paper was presented by Academician N. N. Bogolyubov on 18 January 1963. Orig. art. has: 10 formulas.		
ASSOCIATION: Kiyevskiy gosudarstvenny pedagogicheskiy institut im. A. M. Gor'kogo (Kiev Pedagogical Institute)		
SUBMITTED: 02Jan63	DATE ACQ: 30Jul63	ENCL: 00
SUB CODE: MM	NO REF Sov: 003	OTHER: 000
Card 1/1		

POLYAK, K. I.

33562. K Kritike Voprosa O Klinicheskem Znachenii Tochki Mak Burneya. Uchen. Zapiski (chernovits. Gos. Med. Inst) T. 1, 1949, c. 90-96

SO: Letopis'nykh Statev, Vol. 45, Moskva, 1949

USSR/Human and Animal Morphology - Normal and Pathological.
Pathological Anatomy

S

Abs Jour : Ref Zhur Biol., No 23, 1958, 106039

Author : Polyak, R.I.

Inst :

Title : The Role of Neurovascular Bundles in the Spread of the
Purulent Inflammatory Process. (In Connection with the
75th Anniversary of the Death of N.I. Pirogov)

Orig Pub : Novyy khirurg. arkhiv, 1956, No 6, 74-78

Abstract : The contrast fluid (CF) introduced into the previously
destroyed elbow joint, spreads along the vessels and
nerves in the surrounding tissue only in those cases in
which the fascia surrounding the vessels and the nerves,
or the neurovascular bundles, is affected. By affection
of the nerve or only its epineurium, the CF spreads
along the perineural tissue. Owing to the presence of
the fascial septum between the artery and the vein,

Card 1/2

POLYAK, R.I., kandidat meditsinskikh nauk

Anatomy of the elbow joint. Ortop.travm. i protez. 17 no.6:139
N-D '56. (MLRA 10:2)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii
(zaveduyushchiy - dotsent N.P.Novikov) Chernovitskogo meditsinskogo
instituta (direktor - dotsent M.M.Kovalev)
(ELBOW)

POLYAK, R.I. (Chernovtsy, ul. Gogolya, d.6, kv.6)

Internal strangulation of a supravesicular hernia. Nov.khir. ark.
no.2:93-94 Mr-Apr '58 (MIRA 11:6)

1. Khirurgicheskoye otdeleniye 1-y Chernovitskoy gorodskoy
bol'nitay (nauchnyy rukovoditel' - dots. N.P. Novikov)
(VENTRAL HERNIA)

POLYAK, R.I. (Chernovtsy)

Experimental method of panceratectomy. Pat.fiziol. i eksp.terap.
3 no.1:79-80 Ja-F '59. (MIRA 12:2)

1. Iz kafedry operativnoy khirurgii (zav. - dots. N.P. Novikov)
Chernovitskogo meditsinskogo instituta.
(PANCREAS, surgery
exper. excis. technic (Rus))

POLYAK, R.I.

Changes in the livers of dogs following resection of the pancreas.
Eksper. khir. 5 no. 2:48-49 Mr-Ap '60. (MIRA 14:1)
(LIVER) (PANCREAS)

POLYAK, R.I., kand. med. nauk (Chernovtsy, ul. Gogolya, 6, kv. 6)

Experimental resection of the pancreas. Vest. khir. 92 no.1:34-41
Ja '64. (MIRA 17:11)

1. Iz kafedry operativnoy khirurgii (zav. - dotsent N.P. Novikov)
Chernovitskogo meditsinskogo instituta i fakul'tetskoy khirurgicheskoy
kliniki (zav. - akademik A.N. Bakulev) 2-go Moskovskogo meditsinskogo
instituta imeni Pirogova.

1. POLYAK, R. V.
2. USSR (600)
4. Medical Instruments and Apparatus
7. Automatic apoaratus for the processing of tissues. Medych zhur. No 1 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

VITENKO, Vadim Aleksandrovich; POLYAK, Revera Yakovlevna; SEGAL', Z.G.,
vedushchiy red.

[Northern Lugansk key well (Lugansk Province)] Severo-Luganskaia
opornaia skvazhina (Luganskaia oblast'). Leningrad, Gostoptekhizdat,
1963. 135 p. (Vsesoiuznyi neftianoi nauchno-issledovatel'skii
geologorazvedochnyi institut. Trudy, no.223). (MIRA 17:4)

POLYAK, R.I.; LUZYANINA, T.I.; SMORODINTSEV, A.A.

Biochemical investigations of influenza virus neutralizing protein fractions of sera from different animals. Acta virol. Engl. Ed., Praha 3(Suppl.):61-70 1959

1. Department of Virology, Institute of Experimental Medicine, U.S.S.R.
Academy of Medical Sciences, Leningrad.
(INFLUENZA VIRUSES, immunol.)

POLYAK, R. Ya., Cand Biol Sci -- (diss) "Biochemical nature and properties of thermolabile virus-neutralizing substances of the normal serums of various animals." Leningrad, 1960. 9 pp; (Academy of Sciences USSR, Inst of Physiology im I. P. Pavlov); 240 copies; free; (KL, 50-60)^{1/33}

POLYAK, R.Ya.

Virus-neutralizing activity of the β -lipoprotein fraction of
normal sera of various animals. Vop. virus. 5 no. 1:65-71
Ja-F '60. (MIRA 14:4)

1. Otdel virusologii Instituta eksperimental'noy meditsiny
AMN SSSR, Leningrad.
(INFLUENZA) (LIPOPROTEINS)

POLYAK, R. YA., LUZANINA, T. YA., SMORODINTSEV, A. A. (USSR).

The Nature and Properties of Thermolabile Virus-Neutralizing Normal Sera from Various Animals.

report presented at the 5th Int'l.
Biochemistry Congress, Moscow, 10-16 Aug. 1961

POLYAK, R. YA., YAROV, A. A., ALEXANDROVA, G. I.

"Peculiarities of interaction between type A₂ influenza virus and specific serum."

Report submitted for the 1st Intl. Congress on Respiratory Tract Diseases of Virus and Rickettsial Origin. Prague, Czech. 23-27 MAY 1961.

POLYAK, R.; SMORODINTSEV, A.A.

Electrophoretic investigations on thermostable inhibitors
of Type A2 influenza virus in normal animal sera. Acta virch.
Engl. Ed. Praha 5 no.1:1-3 Ja '61.

1. Dept. of Virology, Institute of Experimental Medicine, U.S.S.R.
Academy of Medical Sciences, Leningrad.
(INFLUENZA VIRUSES immunol)
(BLOOD PROTEINS chem)

VITENKO, V.A.; POLYAK, R.Ya.

Lower Carboniferous sediments of the region of the North-Lugansk
key well. Trudy UkrNIGRI no. 549-63 '63.

Lower-Triassic sediments of the region of the North-Lugansk key
well. Ibid. 564-67 (MIRA 18:3)

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4

YABROV, V.A. & D.YELENA, P.M.; *VII-1* 1a.

Antimutant effect of the animal antibody against the antigenic determinants of the specific antibodies. *VII-1* 1b. (continued)

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4"

POLYAK, R.S.

The effects of cations on the activity and resistance to heating
of thermolabile inhibitors of influenza virus. Acta virol.
(Praha) [Eng.] 8 no.4:335-339 Jl '64.

1. Dept. of Virology, Institute of Experimental Medicine,
U.S.S.R. Academy of Medical Sciences, Leningrad.

LUZYANINA, T.Ya; POLYAK, R.Ya; PIKUL, A.P.; KUDRYAVTSEVA, V.K.

Conditions for influenza virus reactivation from a neutral complex with inhibitors. Acta virol. (Praha) [Eng.] 8 no.2: 172-178 Mr'64.

1. Department of Virology, Institute of Experimental Medicine, USSR, Academy of Medical Sciences, Leningrad.

*

SMORODINTSEV, A.A.; LIZYANINA, T. Ya.; POLYAK, R.Ya.

Virus-neutralizing activity, the nature and the properties of
thermolabile substances of normal serums of different animals.
Nauch. inform. Otd. nauch. med. inform. AMN SSSR no.1:19-20
'61 (MIRA 16:11)

1. Institut eksperimental'noy meditsiny (direktor - chlen
korrespondent, AMN SSSR D.A.Biryukov) AMN SSSR, Leningrad.

X

POLYAK, R.Ya.; YABROV, A.A.

Biochemistry of the thermolabile factor of normal sera activating
immune anti-influenza sera. Vop. virus. 6 no.6:678-684 N-D '61.
(MIRA 15:2)

1. Otdel virusologii Instituta eksperimental'noy meditsiny AMN SSSR,
Leningrad. (SERUM) (INFLUENZA)

VITENKO, V.A [Vitenko, V.O.]; POGREBNYAK, V.A [Pohrebniak, V.O.]; POLYAK, R.Ya.

Sediments of the Moscovian stage of the north Lugansk key well.
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1. UkrNDGRI.
(Novoaydar District--Geology, Stratigraphic)

POLYAK, R. Ya.; YABROV, A. A.; SMORODINTSEV, A. A.

Experimental data on the chemical nature of a nonspecific thermolabile component of normal sera which enhances the activity of influenza virus antisera. Acta virol. Engl. Ed. Praha 5 no.4:261 Jl '61.

1. Department of Virology, Institute of Experimental Medicine, U.S.S.R.
Academy of Medical Sciences, Leningrad.

(INFLUENZA VIRUSES immunol) (IMMUNE SERUMS)

POLYAK, R Ya.

✓ 66. Anticoagulant action of 2-phenylindane-1:3-dione. R. Ia.
Polak Farmakol i Toksikol. 1955, 18, 30-32; Referat. Zh. Biol.
1956, Abstr. No. 74842.—The study was carried out on 29 rabbits.
The most effective anticoagulant action of 2-phenylindane-1:3-dione
is shown with a dose of 20 mg./kg., by mouth. The effect is shown
in 3 hr. after administration, with a max. action in 3-8 hr.
and lasting for 24 hr. 2 doses administered at an interval of 24
hr. are effective in prolonging the action for 3-4 days, and 3 doses
at 24-hr. intervals for 11 days. The prothrombin time after a
dose of 20 mg./kg. does not alter. The no. of thrombocytes sharply
increases and remains high until the coagulation time of the blood
becomes normal. Dicoumarol 10 mg./kg. has an initial anti-
coagulant effect lasting 24 hr. and a max. effect in 48-72 hr.;
the effect lasts 7 days. Doses of phenylindanedione of 60-
100-1,000 mg./kg. do not cause visible change in the behaviour
of the blood; 2,000 mg./kg. is lethal within 2 days. Phenylin-
danedione by comparison with dicoumarol is less toxic, acts
more rapidly, and has a more prolonged action in repeated doses.
A. D. THORNTON-JONES
(Russian)

Chau, Pharmacology, 1st. Leningrad Med Inst.
im I. P. Pavlov.

POLYAK, R.Ya.; VITENKO, V.A.

Mineralogical associations in Permian and Triassic sediments of the
Chernigov salient. Trudy UkrNIGRI no.1:122-124 '59.
(MIRA 12:12)

(Ukraine--Mineralogy)

POLYAK, S.

"Polarographic Analysis of Mixtures of Aldehydes and Peroxides," Zhur. Obshch. Khim., 10, No. 1, 1940. Scientific Research Institute of Chemical Physics Leningrad. Received 29 July 1939

[redacted] Report U-1526, 24 Oct 51

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4

ПОДИУМ, И., : ИМЕНА, И.

"Polarographic Analysis of Mixtures of Aldehydes and Peroxides", Khim. физ.,
Хим., 19, No. 1. 1930. Scientific-Research Institute of Chemical Physics
Leningrad. Received 17 July 1930.

Report V-1704, 24 Oct 51

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001341920016-4"

POLYAK, S., ekonomist; SHUBIN, V., inzh.

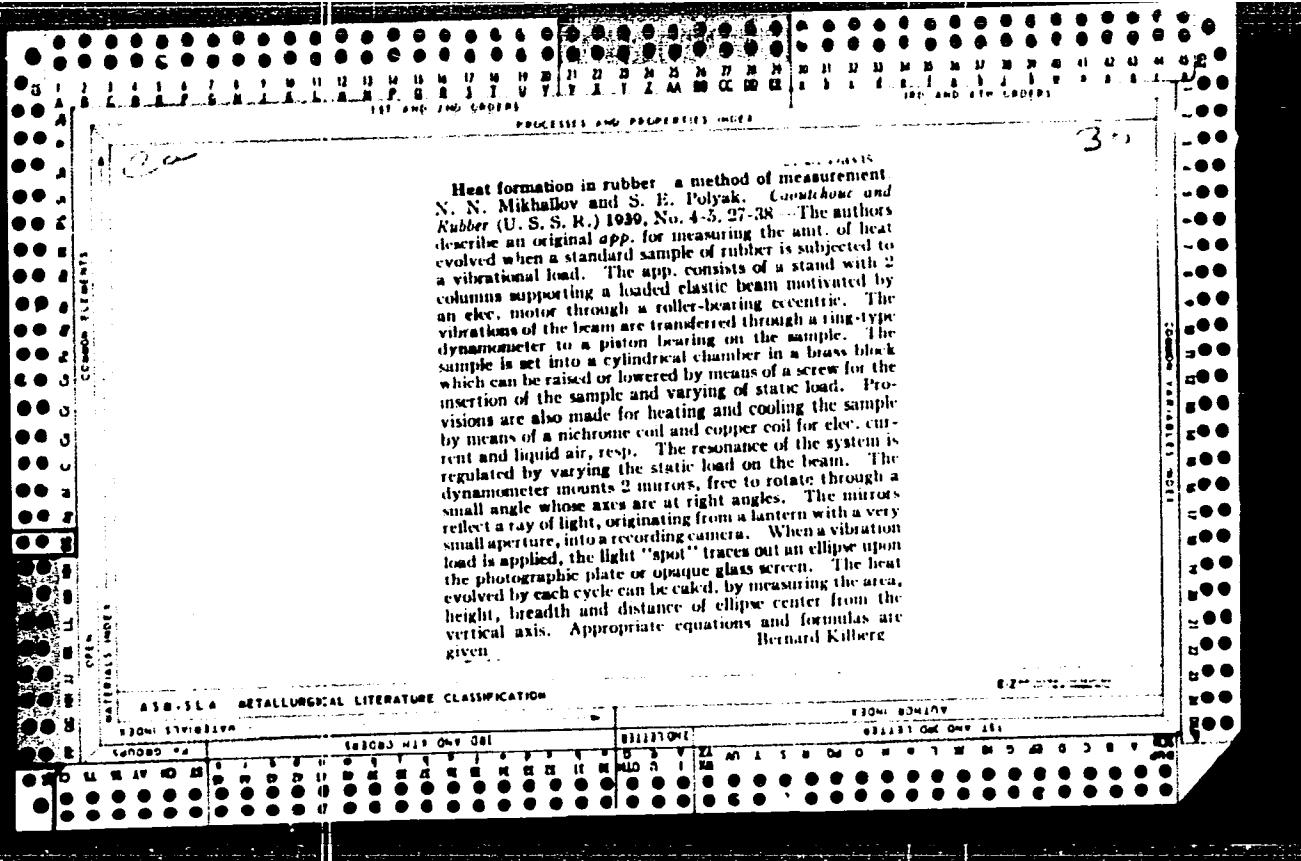
Some problems of business accounting and planning in the fleet
of passenger ships. Rech. transp. 24 no.3:18-19 '65.
(MIRA 18:5)

POLYAK, S. B.

Dependence of the dimensions of the field of vision on the size and brightness of white objects on a projective perimeter and on the general illumination of the room. Trudy LSGMI 64:289-298 '61. (MIRA 15:7)

1. Kafedra normal'noy fiziologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta. Zav. - prof. Yu. M. Uflyand i. Kafedra glaznykh bolezney Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta. Zav. - prof. P. Ye. Tikhomirov.

(VISION RESEARCH) (PERIMETRY)



POLYAK, S. M. and B. V. SOROKIN.

Sovremennye metody kholodnoi shtampovki. Moskva, Mashgiz, 1950. 271 p. illus.

Bibliography: p. 269-(270).

(Modern methods of cold stamping.)

DLC: TS253.P6

SO: Manufacturing and Mechanical Engineering in the Soviet Union,
Library of Congress, 1953.

POLYAK, S.M., inzhener.

Economizing metals by the introduction of cold three-dimensional stamping.
(In: Ryshkov, D.A., ed. *Ekonomika metallov v kuznechno-shtampovochnom*
proizvodstve. Moskva, 1953, p.163-175.) (MLRA 7:1)
(Forging) (Punching machinery)

POLYAK, S. M.

Neuzeitliche Methoden Der Spanlosen Kaltverformung (Von) S. M. Polyak und B. V. Sorokin. Berlin, Technik, 1954.
256 p. Illus., Diagrams., Tables.
Translation From The Russian: Sovremennye Metody Kholodnoy Sintampovky, Moscow, 1950.
"Literaturverzeichnis": P. (246)-247.

SO: N/5
662.33
.P7

POLYAK, Samuil Moiseyevich; ROMANOVSKIY, V.P., redaktor

[Cold die stamping] Kholodnaia ob'emmaia shtampovka. Pod obshchey
red. V.P.Romanovskogo. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
stroit. lit-ry, 1955. 92 p.
(MLRA 9:12)
(Dies (Metalworking))

POLYAK, S.M., kand. tekhn. nauk; ALEKSEYEVSKAYA, Ye.A., red.;
KOVAL'SKAYA, I.F., tekhn. red.

[Methods of sheet-metal forming without power presses] Bespres-
sovye metody formoobrazovaniia listovykh detalei; obzor. Mo-
skva, TSINTIMASH, 1961. 33 p. (MIRA 16:4)
(Explosives in sheet-metal work)
(Electrohydraulic effect)

ACCESSION NR: AP4042508

S/0182/64/000/007/0016/0018

AUTHOR: Sankharov, G. S., I. P. Tsipulin, S. M. Polyak, and S. V. Veretennikov

TITLE: Some problems in SAP sheet forming

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 7, 1964, 16-18

TOPIC TAGS: SAP, SAP sheet, SAP sheet forming, SAP sheet explosive forming, explosive forming

ABSTRACT: Aluminum clad SAP sheets with thicknesses up to 3 mm have more or less satisfactory formability at room temperature (unclad SAP sheets cannot be formed below 300C). Two methods of applying the aluminum cladding have been developed [conditions not specified], with one of them producing much better formability than the other. In deep drawing tests performed with aluminum clad SAP sheets 1 and 2 mm thick, reductions as high as 80 and 41%, respectively, were obtained. Corresponding figures for flanging tests were 14 and 14%.

Card 1/2

ACCESSION NR: AP4042508

The minimum bending radius for sheets 1--3 mm thick varies from 4 to 3 sheet thicknesses for both longitudinal and transverse specimens. Dish-shaped end closures 345 mm in diameter and 75 mm deep were formed from a blank 440 mm in diameter and 2 mm thick by explosive forming, hydrostatic pressure, or by conventional die forming. No difficulties were encountered in explosive forming. Satisfactory results were also obtained in forming with hydrostatic pressure applied in steps with complete pressure release after each step. Conventional die forming produced unsatisfactory results. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ATD PRESS: 3085

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 001

OTHER: 000

Card 2 / 2

L 23020-66
ACC NR: AP6007658

EWT(m)/EWP(t)/EWP(k) IJP(c) JD/HW.

SOURCE CODE: UR/0413/66/000/003/0016/0016
S/ B
Polyak, S. M.; Perper, F. A.; Glukhatkina, Ye. A.; Bakulin, V. I.

AUTHOR:

ORG: none

TITLE: Device for forming without the use of presses. Class 7,
No. 178348

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3,
1966, 16

TOPIC TAGS: die,

metal forming

ABSTRACT: An Author Certificate has been issued for a device for forming without the use of presses; it consists of a concrete female die, which is enclosed in a metal housing duct for evacuating air from the working cavity, and drawing and hold-down rings. In order to increase the durability of female dies for multiple dynamic loading, the upper base of the die and the drawing ring have an intermediate layer of rubber with 1-mm holes situated to fit the air ducts in the die; on evacuation the rubber adheres tightly to the female die (see Fig. 1). Orig. art. has: 1 figure. [LD]

Card 1/2

UDC: 621.7/044.2

SUB CODE: 11, 13/

SUBM DATE: 26Mar64/

Card 2/2 plw

APPROVED FOR RELEASE

L 36128-66 EWT(n)/EWP(k)/EWP(t)/ETI IJP(c) JD/HW
ACC NR: AP6016575 (A) SOURCE CODE: UR/0182/66/000/005/0001/0007 91

AUTHOR: Popov, Ye. A.; Bocharov, Yu. A.; Polyak, S.M.; Stolbunov, A. S.; Raykh, D.
B.; Legchillin, A. I.

ORG: none

TITLE: Metal forming by means of a pulsed magnetic field, Part. 1. Nature of process and equipment 16

SOURCE: Kuznechno-Shtampovochnoye proizvodstvo, no. 5, 1966, 1-7

TOPIC TAGS: pulsed magnetic field, metal forming, die, electric energy conversion

ABSTRACT: Metal forming by means of a pulsed magnetic field (PMF) is based on the conversion of the electric energy accumulated in the storage element during discharge via an inductor, to the energy of a pulsed magnetic field which creates the pressure shaping the metal blank. In this connection, the authors present formulas for determining the electric and magnetic parameters of the process. It is shown that the efficiency of PMF used in the forming of sheet metal ranges from 10 to 40%. There exist several techniques of PMF metal forming, as illustrated in Fig. 1: a) reduction of tube diameter by means of an inductor surrounding the tube (Fig. 1, a); b,c) flaring of the tube end by means of an inductor located within the tube (Fig. 1, b) with placement of die outside the tube in order to prevent the flaring of the remainder of

Card 1/3

UDC: 621.7.044

L 36128-66
ACC NR: AP6016575

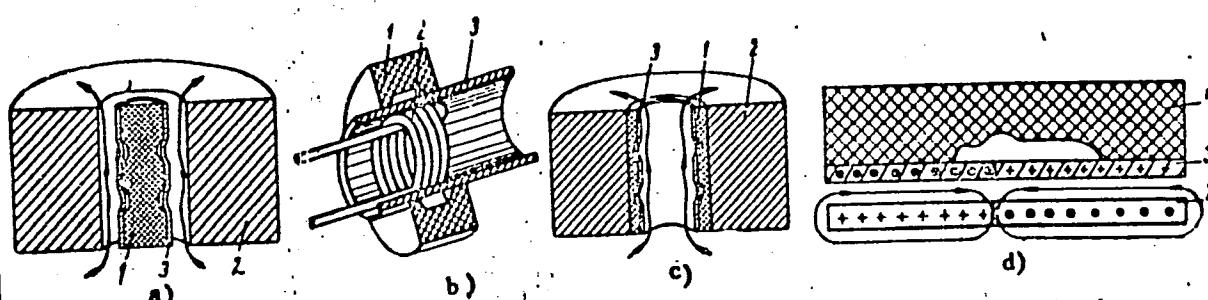


Fig. 1. Techniques of metal forming by means of PMF

1 - die (mandrel); 2 - inductor; 3 - blank

the tube after the field reaches a certain value (Fig. 1, c); d) sheet-metal forming by means of flat inductors (Fig. 1, d). In addition, PMF devices employing flat inductors may be used to blank and pierce metals, to assemble permanent connections, to

2/3

L 36128-66
ACC NR: AP6016575

straighten plane and curved surfaces, and to shape metal located within a chamber, housing or shell consisting of dielectric materials. These devices consist of five principal components: charger (high-voltage rectifier), power storage element (capacitor banks), discharger-switch (arc discharger), igniter (thyatron), and forming element (working inductor and die or mandrel along with attachments for clamping the blank). The specifications of a Soviet-built PMF metal-forming installation, include: supply voltage, 230 v; mean discharge current, 15 a; maximal energy stored in capacitor bank, 7.2 kilo-joules; maximum electromagnetic pressure exerted on blank, 6400 kg/cm²; time per cycle, 2 min; pulse time (half-period time), (40-50) 10⁻⁶ sec; maximum diameter of blank, 140 mm; dimensions of PMF installation, 1200x700x1500 mm. The second part of this investigation, which describes the mechanism of plastic deformation by means of PMF, will be published in the next issue of the same journal. Orig. art. has: 10 figures, 21 formulas.

SUB CODE: 13,20,11,09/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001/

Card 3/3 //

L 08983-67
ACC NR: AP6028389

high-speed motion picture camera with respect to a flat blank being drawn and formed in a ring die by means of 10- and 40-kilojoule devices based on IM-5-150 capacitors with a minimum discharge time of 10^{-6} sec. The kinograms thus obtained were used to construct curves of the displacements of individual points on the initially flat blank in time. Findings: during the initial stage of deformation the axial displacement of elements of the central part of the blank is smaller than that of the elements located closer to the die edge. During the later stages of deformation, however, the elements of the central part get additionally accelerated, overtaking the elements of the peripheral part of the blank. This is attributable to radial non-uniformity of the intensity of the magnetic field and it engenders plastic deformations in these elements; the plastic deformation continues until its work absorbs the difference between the kinetic energies of central and peripheral elements of the blank, or until the displacement rates of these elements get equalized. In addition, it is established that, all other things being equal, the increase in pulse energy leads to an increase in the height of the forging, while at the same time local convexity in the central part of the forging also increases. PMF forming of metals with low electrical conduction can result in much greater heights of the forgings if the inductor-facing surface of the blank is coated with a metal with high electrical conduction. It is further experimentally established that PMF forming can be used to perform assembling-joining operations if a cylindrical conductor is employed; thus, e.g. it can be used to produce more compact sheathed multicore cable. These are not the only applications of PMF. It is clearly ne-